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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/724,149

12/01/2003

Toshiaki Kusunoki

AETE.0004

1618

38327

7590

11/25/2005

REED SMITH LLP

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EXAMINER

PHILOGENE, HAISSA

ART UNIT

PAPER NUMBER

2828

DATE MAILED: 11/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/724,149	KUSUNOKI ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Haissa Philogene	2828	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on RCE filed 10/17/05.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4, 6-8, 15-19, 22-26, 28-31, 34-37, 40-43, 46-49, 52-55, 58-62, 64-68, 70-74 and 76-82 is/are allowed.
- 6) ☒ Claim(s) 10-14, 32, 38, 44 and 50 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 August 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                                                               |                                                                                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                                   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                          | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/17/05</u> . | 6) <input type="checkbox"/> Other: _____                                                |

Continuation of Disposition of Claims: Claims pending in the application are 4, 6-8, 10-19, 22-26, 28-32, 34-38, 40-44, 46-50, 52-55, 58-62, 64-68, 70-74, 76-82.

## **DETAILED ACTION**

### ***Claim Objections***

Claims 4, 8, 10-14, 26, 32, 38, 44 and 50 are objected to because of the following informalities: In claim 4, line 16, delete " . " after "upper bus electrode". In claim 8, line 13, delete " ; " after "is". In claims 10-14, 26, 32, 38, 44 and 50, line 15, respectively, delete "said" before "stripe-shaped spacer". In claims 10-18 and 26, change "electrodes" after "stripe-shaped" to --electrode--. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 11-13 and 32, 38 and 44 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for "said stripe-shaped upper bus electrode being formed out of at least three metal films ...", does not reasonably provide enablement for "said stripe-shaped spacer electrode being formed out of at least three metal films ...". The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. In fact, the specification does describe the stripe-shaped spacer electrode being formed out of at least two metal films but not of at least three metal films...(as recited). In addition, although the specification mentions that the stripe-shaped upper bus electrode can be used as stripe-shaped

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spacer electrode, it fails to describe a situation wherein both the stripe-shaped upper bus electrode and the stripe-shaped spacer electrode are formed out of at least three metal films... This issue consequently raises doubt as to enablement.

Claims 14 and 50 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for "said stripe-shaped upper bus electrode being used as scanning lines....", does not reasonably provide enablement for "said stripe-shaped spacer electrode being used as scanning lines ...". The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. In fact, the specification does describe the stripe-shaped spacer electrode being used as both stripe-shaped spacer electrode and scanning lines. However, it fails to describe a situation wherein both the stripe-shaped upper bus electrode and the stripe-shaped spacer electrode are used as scanning lines... This issue consequently raises doubt as to enablement.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 10 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kusunoki et al., Patent No. 5,936,257, in view of Abe et al., Patent No. 6,104,136.

Kusunoki discloses a display device comprising: a display panel (100) comprised of a cathode substrate (14) and a fluorescent screen substrate (110), said cathode substrate (14) including an array of thin-film type electron sources (see Col.8, lines 11-12) each having a lower electrode (13), an upper electrode (11) and an electron accelerating layer (12) retained between said lower electrode and said upper electrode, each of said electron sources radiating electrons from said upper electrode (11) in response to a voltage ( $V1 + V2$ ) applied between said lower electrode (13) and said upper electrode (11), said fluorescent screen substrate (110) including a fluorescent screen (114) in which phosphors excited by said electrons to thereby emit light are formed; and a drive circuit (41, 42) for driving said lower electrode (13) and said upper electrode (11), wherein one or both of said lower electrode (13) and an upper bus electrode (32) are stripe-shaped electrodes in an image display area (see Fig.9 and Col.12, lines 34-35 and 57-60) where said array of thin-film type electron sources of said display panel are disposed in a matrix (see Figs. 9 and 10 and also Col.8, lines 11-13), said upper bus electrode (32) being provided to feed power to said upper electrode (11) (see also Col.10, lines 8-9), a stripe-shaped spacer electrode 60 (see Fig.13) and wherein said stripe-shaped upper bus electrode (32) has a laminated film structure of at least two layers of metal thin films (see Col.12, line 56-Col.13, line 2). Kusunoki does not explicitly disclose the stripe-shaped spacer electrode having a laminated film structure of at least two layers of metal thin films. However, this feature is well-known in the art as evidenced by Abe which discloses in Figs 3 and 4 a display device comprising a stripe-shaped spacer electrode (1503) of spacer (1500) having a laminated film

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structure of at least two layers of metal thin films (see Col.20, lines 51-52 and Col.40, lines 42-44 and 54-57). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to employ the laminated film structure as taught by Abe into the Kusunoki type device, because it would allow excellent evacuation conductance when the interior of the envelope is evacuated, thereby resisting to atmospheric pressure in order to prevent destruction of the display panel.

### ***Allowable Subject Matter***

Claims 4, 6-8, 15-19, 22-26, 28-31, 34-37, 40-43, 46-49, 52-55, 58-62, 64-68, 70-74 and 76-82 are allowed.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Shibata et al., Patent No. 6,153,973.

### ***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Haissa Philogene whose telephone number is (571) 272-1827. The examiner can normally be reached on 8:30 A.M.-6:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MinSun Harvey can be reached on (571)272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

hp

Haissa Philogene  
Primary Examiner  
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